

Surviving Heat Emergencies

The human body is capable of enduring extreme temperatures. Normally, internal mechanisms help us compensate during these conditions. Our bodies are cooled further by the evaporation of sweat. Illness may develop when these internal mechanisms become overwhelmed by extreme conditions.

Illnesses caused by heat exposure are usually progressive and can rapidly become life threatening.

WHO IS AT RISK?

Anyone can be at risk for heat-related illnesses. Some people are at greater risk than others, this includes:

- ◆ The very old and the very young
- ◆ Those who work or exercise strenuously
- ◆ Those with predisposing health problems, such as diabetes or cardiovascular disease
- ◆ Those who have had a heat-related illness in the past
- ◆ Those who take medications to eliminate water from the body (*diuretics*)

Types of Heat Emergencies

HEAT CRAMPS

HEAT EXHAUSTION

HEAT STROKE

HEAT CRAMPS *least severe*

Signs & Symptoms

- Painful spasms of skeletal muscles, usually in the legs and abdomen (*cramps*)
- Normal skin temperature
- Moist skin

Treatment

- Resting comfortably in a cool place
- Light stretching of the affected muscles
- Replenishing fluids with cool water or a commercial sports drink (*no alcohol*)

An individual can usually resume activity when the cramps are relieved, however, they should be watched carefully for further development of heat-related illness.

HEAT EXHAUSTION *more severe*

The early stage of the body's internal cooling mechanism is becoming overwhelmed. Typically, heat exhaustion occurs after long periods of strenuous exercise or work in high temperatures.

Although it is commonly associated with athletes, firefighters, and construction workers, it ***can affect a person who is relaxing or standing still in the heat.***

Eventually, enough fluid is lost through sweating that blood volume decreases. Since the body continues to shunt blood to the skin in an attempt to eliminate excess heat, less blood is

flowing to vital organs. Essentially, the person goes into a form of shock. (*Heat exhaustion does not have to be preceded by heat cramps*).

Signs & Symptoms

- Normal or below normal body temperature
- Cool, moist, pale skin
- Headache
- Nausea
- Dizziness and weakness
- Exhaustion

Treatment

- Rest comfortably in a cool place
- Drinks cool liquids
- No Alcohol
- Offer fluids only if the victim is conscious
- Water is less likely than other fluids to cause vomiting and is more quickly absorbed into the body
- Do not let the person drink too quickly; one half glass every 15 minutes is appropriate
- ***If heat exhaustion progresses and the body temperature climbs, the victim may begin to vomit and show changes in their level of consciousness. IF THIS OCCURS, CALL 911.***

HEAT STROKE *most severe*

(least common of the heat emergencies)

This usually occurs when victims ignore the signs and symptoms of heat exhaustion or do not act quickly enough to get help.

HEAT STROKE (continued)

With this heat-related illness, the body's cooling mechanisms are overwhelmed by heat and **stop** functioning.

Signs & Symptoms

- Extremely hot body temperature
- Red, dry skin (*no sweat*)
- Confusion
- May have a strong pulse initially, as the body's organ systems fail, the pulse will become more weak and irregular
- Rapid shallow breathing
- Victims refuse water
- Vomiting
- Convulsions
- Coma

Treatment

Recognize as early as possible so care can be provided immediately. **THIS IS A POTENTIALLY LIFE THREATENING ILLNESS -- CALL 911**

Until help arrives:

- ◆ Stop giving fluids if victim is nauseated and vomiting
- ◆ Position victim on their side
- ◆ Ensure their airway is clear, monitor breathing and consciousness
- ◆ Keep the victim lying down
- ◆ Continue to cool the body:
 - Soak towels or sheets & apply to the victim's body
 - Use a water hose
 - Place ice or cold packs to wrists, ankles, groin, neck, or in each armpit
- ◆ Do not apply rubbing alcohol
- ◆ Do not immerse victim in a tub of cool water because doing so may make it difficult to maintain an open airway
- ◆ Be prepared to do rescue breathing or CPR



Increase your intake of non-alcoholic, non-carbonated, caffeine free beverages (such as water and juice)



Wear clothing that is light in color and loose fitting



Avoid the outdoors during extreme heat. Stay out of the sun.



Stay in an air-conditioned environment if possible (shopping malls offer relief if your home is not air-conditioned).



Check on the elderly. They are especially susceptible to heat-related illnesses.



Eliminate strenuous activity, such as running, biking, and lawn care work when it heats up.



Eat less foods that increase metabolic activity/heat. Proteins are an example. Increased metabolic heat increases water loss.

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of the Long Beach Fire Department are
concerned about your health.*

Please help us help you.



SURVIVING HEAT EMERGENCIES



Long Beach Fire Department

... more than fighting fires